

# **T** News Letter **TDARS**

G3ZME  
G6ZME

**TELFORD AND DISTRICT AMATEUR RADIO SOCIETY**

[www.TDARS.org.uk](http://www.TDARS.org.uk)

FOUNDED 1969

[www.TelfordHamfest.co.uk](http://www.TelfordHamfest.co.uk)

Issue 266

Dec/January 2015

[www.TDARS.org.uk](http://www.TDARS.org.uk)

## *Programme*

[www.telfordhamfest.co.uk](http://www.telfordhamfest.co.uk)

December 17 Mulled wine and Mince pies. Informal evening

December 24, 31 Club Closed. Monitor 144.600MHz and 'TF. 7:30pm onwards

January 7 FORUM MEETING SPECIAL: Where from here? Open to everyone for your views and ideas of TDARS events & activities for 2015 and onwards. 8pm.

January 14 Committee meeting— follow up items from Open Forum. GX3ZME OTA

January 21 Construction Evening: Practical Session—Winter Projects 7:30pm

January 28 Linux and Amateur Radio. Dave G0CER

February 4 Committee Meeting and GX3ZME on-the-air.

February 11 Under-a-Fiver Construction Competition. Don't leave it to others . . .

February 18 Bowls social evening in the Main Hall. Refreshments included

February 25 Railway Signalling. Brian G6UDX explains the mysteries

March 4 Committee Meeting and GX3ZME on-the-air.

March 11 Main Construction Competition. Don't forget: Beginners' Trophy too

March 18 Digi Modes, incl. live demo. Eric M0KZB

March 25 ANNUAL GENERAL MEETING 8pm.

*For Amateur Radio Exam Training—enquiries to Mike G3JKX (01952 299677)  
For Morse Training and Morse Proficiency Tests Martyn G3UKV or Eric M0KZB.  
For Equipment Loans & Returns contact John M0JZH or Don 2E0DSN  
Radio Amateur Exams- Latest: [www.tdars.org.uk/html/training.html](http://www.tdars.org.uk/html/training.html)*

VILLAGE HALL, MALTHOUSE BANK, LITTLE WENLOCK, TELFORD, SHROPSHIRE. TF6 5BG

## Editorial

It's good to have any contributions for the bi-monthly Newsletter, in almost any format including hand written. Peter 'FGN regularly passes to me pieces of paper and photographs which cover everything from his summer-time explorations around the country to online references—these are all welcome. Not everything I receive is included, but I do my best to please all interests and readers, whilst keeping manageable the number of photos I reproduce. The Internet copy of this Newsletter is better suited to photographs, since it is so easy to zoom-in to see detail and people's faces properly. Also, Rob includes quite an extensive photo gallery on our Club Website, in case you hadn't noticed, with lots of interesting content. ([www.tdars.org.uk](http://www.tdars.org.uk))

On the next page you will find updates for this year's club construction projects. As you can see, several have made positive progress, and will hopefully be completed at the club meeting planned for January 21st, or soon after at home. Several other individual projects are in the pipeline. Some newer recruits to our hobby put off building their own equipment, and even sometimes their own wire antennas. I believe that a prime aim of a radio club such as ours is to encourage people to have-a-go at home construction; it is incredible how much fun and satisfaction can be gained from making something of your own, however simple or complex the project is, that actually works. Not so many years ago, I put together a basic 40 metre rig, which only gave out about 2 or 3 watts, CW only and using a direct conversion receiver. I took it abroad with me and had great fun and quite a few QSOs with it. Some while later, I bought one of those amazing, compact Yaesu FT817 transceivers that worked all bands from 160m to 70cm, all modes, with up to 5 watts output. Whilst it did all the things it claimed to do, and more—To this day I can honestly say that I had more kicks and satisfaction from that original little morse station that I built for myself, step by step, component by component. It's never too late to start!

Whilst on the topic of home construction, a reminder that our “Under-a-Fiver” (that’s £5) construction competition takes place on February 11th, whilst the Main Construction event is due on March 11th. Please think of bringing something along to these evenings, as they represent the health of our hobby. Entries have fallen in recent years, and some years the Novice Constructor’s Trophy has not been awarded due to lack of entries. To just explain further, the Under £5 event is for home made electronic items, where the essential components, excluding the PSU, knobs and even case cost less than about £5. The Novice section of the main construction contest is for entries from members who have never entered a project before. So, don’t leave it too late; these dark, cold evenings are ideal for switching on that soldering iron.

# MIV

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**TELFORD & DISTRICT AMATEUR RADIO SOCIETY**

**CHAIRMAN:** Derek Southey G0EYX (01785 604904)

**VICE-CHAIRMAN:** Martyn Vincent (01952 255416)

**SECRETARY:** John Humphreys M0JZH (07824 737716)

**TREASURER:** Jim Wakenell G8UGL (01952 684173)

**CURATOR** : John Humphreys M0JZH (07824 737716)

**NEWSLETTER EDITOR:** Martyn Vincent G3UKV (01952 255416)

**PUBLICITY :** Dave GOCER (01630 638699 or 07971 416940, leave msg)

**Committee:** Simon G0UFE; Eric M0KZB; Martin 2E0TRO; Brian G6UDX; Trophies/Certs: G3UKV;

QSL Manager Paul M0PNN; Assist. Curator: Don M0TBQ (ex 2E0DSN).

Little Wenlock V.H. committee Liaison officer Martin 2E0TRO

Thanks for Newsletter input this time from John M0JZH, Peter M1FGN, Dave G0CER, Peter 2E0ZSU, Don M0TBQ. Next edition mid February. Keep the I/P coming please!

# *Qtc: News & Information*



**TDARS MEETINGS EVERY WEDNESDAY AT LITTLE WENLOCK  
VILLAGE HALL UNLESS INDICATED OTHERWISE  
ON THE FRONT PAGE PROGRAMME.  
ROOM BOOKED FROM 7PM - 10PM.  
MEETINGS USUALLY COMMENCE AT 8PM**

**Please note: A current membership card must be shown to borrow  
TDARS equipment. Please return borrowed equipment promptly .**

## **Progress in the TDARS projects** is as follows:-

**1) Continuity tester** with buzzer output is intended to be built in January at club meeting on Jan. 21st. Whilst it has been pointed out that a buzzer + battery + 3 wires could achieve the same outcome, a 555 timer chip plus a few other components mounted on a small piece of copper board is planned with a view to helping those who have never, or rarely, made any simple project for themselves. It is also a useful widget for anyone to have in the shack or garage! Contact Simon 'UFE or John 'JZH for any further information or to add your name to the list.

**2) Lightweight 7 ele 2 metre** SOTA style portable antenna - about 7 of these are being constructed. Further progress is planned for the same January 21st construction evening, now that the aluminium and plastic tubing have been purchased. Rob 'TOY or Paul 'PNN are your contacts here.

**3) Hands-free kit** for mobile radio, including up/down channel button selection and rig connection. Several have been purchased and presumably installed in members' mobile stations. If anyone wishes to follow suit, or wants advice, contact Brian 'UDX.

Martyn 'UKV has also completed a working **directional coupler** if any members are interested, which works well from about 4MHz to 700 MHz. If you're not familiar with their use and operation, an excellent reference is Ed Skilton's (EI9GQ) Homebrew articles in October & November '14 issues of RadCom. Martyn has several (free) spare ferrite toroids if anyone would like to build this very useful piece of test equipment.

Tony M0TAW, and perhaps others are making a fused **multi-way DC outlet box** for shack or portable use, using a mixture of banana plug, screw down and Anderson Powerpole connectors. Many options are available here—Jim 'UGL may be able to offer help or advice.

Our **guest speaker Dr John Moyle G1AWJ** who gave a presentation "Aspects of telecommunications during the Great War" turned out to be very illuminating and well prepared. It was fascinating to hear about the contrasting TX modes used for submarine cables and early wireless techniques, for example, and the variety of events and developments that took place outside the European theatre of war, of which many of us were unaware. We hope to invite John back some time in 2015.

18 members and their families joined the **Christmas Meal** in December, which was about ten less than last year. Sue, the landlady and her team really prepared an excellent meal with all the trimmings, which was very good value for money. A few moments thought was given for Nigel Pugh, G1GZZ, a good friend of Peter & Helen Westwell 2E0ZSU, who was booked to come to the meal, but had a terrible accident the previous fortnight (Thurs. 28 November) whilst working on a vehicle. The photograph shows Nigel (2nd left, next to Peter) at last year's Christmas meal at the Duck Inn.  
Photo:- **Dec.11th 2013** >>>>





The Committee hopes that we will have a large turnout for a discussion entitled -

## **“The future of Telford & D.A.R.S.”**

This is intended to be an opportunity for anyone interested in the hobby of amateur radio and electronics locally to put forward their suggestions as to what our Society might do in terms of activities and progress to meet the aims and objectives written in our

Constitution — namely “***to further the well-being of amateur radio and electronics in all aspects***”.(para 2).

The usual 'First in the month Committee Meeting' will take place the following week (Jan.14th) so that positive suggestions from the Open Forum can be discussed by the Committee and appropriate action taken to begin to implement members' proposals for the future.

Please try to encourage everyone with an interest in TDARS to come along to the Open Forum. The meeting will be led and chaired by our Chairman, Derek Southey G0EYX.



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## OUTDOOR AND PORTABLE EVENTS IN 2015

John M0JZH has supplied the following framework for portable events in 2015. Martyn G3UKV has added the various microwave portable events, although these dates are not yet confirmed, but mostly take place on The Brown Clee, meeting at the gate for access at 9:30am

January

February

March Wappenshall (Shrewsbury & Newport Canals Centre)

April Marconi -Tywyn (24-26th April, set-up on 24th, operating GB8MD 25th, taking down 26th).

May 6m Portable LWVH Field 24 hrs. Microwave (Brown Cle) 2-3rd, 24th.

June 6m Trophy (20th - 21st). Microwave 28th. Site TBA

July NFD (4th - 5th). Microwave 28th. Site TBA

August            Microwave 30th. Site TBA.

September QRP. HamFest 6th. Microwave 27th TBA

October	JOTA (3rd weekend in the month, awaiting clarification).
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November

December Wappenshall (S &amp; N Canals Centre)

**GX6ZME**  
**on Long**  
**Mynd:**  
**Oct 14**  
**Photo**  
**M0TBO**



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**At the end of November, it was decided to go ahead with the construction of the portable 7 element yaqis, since the main materials arrived just in time, thanks to Rob & Paul.**



## EDITOR'S Note:-

Whilst usually avoiding 'lifting' articles from other publications, I thought this article earlier this year in QST magazine was quite amazing! In one page it covers DSP, small receive antennas & DFing, contesting and computer logging, the Reverse Beacon Network, remote operated stations and CW. The author is Michael Wells G7VJR - who may be familiar to you, as he is the guy who wrote and developed the software known as "Club Log", which is now used around the globe. Also, like TDARS, he's looking forward to the future directions of our hobby - Ed



## Personal Visions

# An Invitation to Innovation

**Amateur Radio's second century will be vastly different from its first.**

Michael Wells, G7VJR

Change, for the Amateur Radio community, is constant. In the past century we have seen technologies invented, matured, and superseded continuously. Now, as always, Amateur Radio is innovating and evolving. I want to discuss three developments: advancements in the way we receive, the question of competitiveness on the air, and, last, how the Internet affects us.

### Antennas and Receivers

Over the past decade or two, we have become experts in dealing with interference by using increasingly elaborate digital signal processors (DSPs) in our receivers that help us operate within the context of man-made noise and congestion. But we have only just begun to explore the possibilities of DSPs right at the input — that is, a DSP sampling directly from an antenna. Now that we have the computer power at our disposal, this is becoming a hot topic.

The possibilities of this receiver architecture are remarkable. I was lucky enough to tour the UK's radio monitoring station at Baldock, Cambridgeshire, part of a network of listening posts that can be used to combat spectrum abuse, including on the HF bands. It has the capability of direction-finding signals, and through international coordination this can lead to fast, accurate location of rogue transmitters.

To my surprise, the antenna farm for the Baldock station is only a small field of ground-mounted monopoles! Each is connected to an independent DSP receiver and then to a computer. The timing and phase differences of each of the signals are analyzed in real-time, and then displayed as traces on a two-dimensional plot of azimuth and elevation.

Thanks to the realistic cost of computer equipment today, this technology is within the reach of radio amateurs. In this era of Internet-connected receivers, such a DSP station could be an extremely powerful resource for our purposes.

Throughout the ARRL Centennial Year, QST is sharing the thoughts of selected members as they consider the current state of Amateur Radio and the future of our avocation at the dawn of its second century.



### The Matter of Competition

Certain areas of Amateur Radio have become extraordinarily competitive. My work in building *Club Log* has brought me into close contact with the ambitious side of the hobby, both through the development of DXCC leaderboards and through connecting with DXpeditioners and DXers along the way.

There is a positive trend toward making DXing more accessible. Those with modest stations are being catered to by increasingly sophisticated expedition teams, for example. We are in an era where rare entities are activated by experienced and technically savvy travelers with the commitment to take high-performance stations and lightweight amplifiers to locations that were once considered impossible.

Contests also open the opportunity to make exotic DX contacts to almost everyone, while also satisfying the wish for the biggest stations to compete with each other. In this way, contesting is truly inclusive.

So long as we devise contests and award schemes, chase DXCC entities or slots, or set personal goals, Amateur Radio will have a tendency to be competitive and encourage us to build higher performance stations; it encourages us to make progress.

### Computers, the Internet, and Amateur Radio

The Internet shook our hobby in the late

1990s. For the first time, our monopoly on free communications was taken away from us. However, we have benefitted enormously from the Internet, too.

My personal Internet favorite is the Reverse Beacon Network (RBN) at [www.reversebeacon.net](http://www.reversebeacon.net), which knitted itself into our operating habits almost overnight.

Testing antenna performance is also far more quantifiable, thanks to the automatic signal-to-noise reports provided. In a contest, you'll never waste much time calling, because the RBN data is readily integrated through old DX cluster interfaces with contest software. Without the Internet, we could not have RBN.

Requesting QSLs online is now simpler and less wasteful, too. Thanks to the widespread adoption of Online QSL Requests (OQRS), unwanted cards have been eliminated from the bureaus and we have been saved from sending "green stamps" in envelopes. Meanwhile, we have preserved our tradition of exchanging QSL cards when requested.

Of course, the Internet has given us a hybrid, too. Remote transceivers allow us to live in locations where radios are not viable, and yet still control a station that we own, or share, that is in a more favorable location.

### Let's Stay Close to the Action

Some of the possibilities I've described with DSP receivers will find their place — perhaps as projects for dedicated constructors, contesters and DXers — and I hope their designs will gradually find more general use. Meanwhile, we will continue to enjoy the timeless joy and efficiency of Morse code, the delight of hearing our digital signals reflected off the moon (or just via an Internet receiver on the other side of the world), and the thrill of working a new DXCC by studying the pileup on a PC waterfall display — calling in the right place, at just the right moment. Let's stay open to innovation, and light up our bands for another century!

GB2WSG (2nd **W**ellington **S**cout **G**roup) by John M0JZH

Just before the last newsletter I had been canvassing for some help over the JOTA weekend, and thanks to all who turned out to make it the success that it was.

The station that we put on was very similar to the last one, however instead of running two HF SSB stations, I made the decision to put on just the one and substitute the second one for a PSK31 station, something that I had not thought about doing before even for myself. Hastily I ordered a cable to allow for me to connect my TS-570 to my laptop, installed Ham Radio Deluxe and then started to listen and learn. And a learning curve ensued. First of all I had to fathom out without instruction manuals from my admittedly cheap cable, how to connect the radio and laptop together to allow them to work seamlessly. It sounded easy, but until I had worked out how to do it, it was not. Within a few days I had it working, with Ham Radio Deluxe (HRD) doing all the work, controlling the radio, providing the radio with the correct coding and decoding of PSK31 signals, and also getting the e-qsl card sent out automatically. Sorted.

If you have ever 'listened' to PSK then you will notice that a lot of the QSO's are very much the same, and this is achieved by the use of macro's, ways of preselecting a few sentences that give information about your station etc. This can be quite boring, however if you come across a station who can type (assuming that you can as well) then it can make for quite a rewarding 'conversation'.

So that was the three stations organised complete with antennas:

1. Robin 2E0DML on 2m FM using the collinear attached to the club mast, and the club IC710
2. John M0JZH on the 20m PSK31 station using Simon G0UFE's excellent 20m delta loop
3. Simon 2W0CHV on his own FT102, and also at times his FT101Z (not the D version)

Over the weekend the tally of stations contacted was not huge, but it was all about showing the scouts about radio and helping them to gain badges over the weekend.

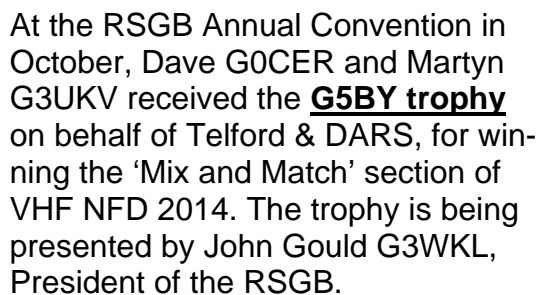
104 contacts gained across 30 countries and including 29 scout groups. Quite a good result, and as we were leaving we have been asked already by 2nd Wellington to provide the same again for them next year.



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As the year draws to an end, the weekly UK Activity Contests (UKAC) for 2014 draw to a close. With just a few entries to go as at Dec. 13th, TDARS is placed 26th out of 110 clubs entering overall, but this reasonable score was achieved by just 3 members—G0CER, G3UKV and G8UGL. Out of 635 individual entries, Dave is running 65th, Martyn 185th and Jim 473rd. Dave 'CER has asked if there's enough interest for the Tuesday evening UKACs in 2015 to make a bit more impact next year? Or perhaps enter the 80 metre CC (Club Championships) series on HF, which run 8-9:30pm on Monday evenings, rotating SSB, CW and data modes? The choice, if at all, rests with members who have the time, interest and equipment to get on the bands at the necessary times. Comments at meeting January 7th at club perhaps . . .





A photograph of a silver trophy cup with two handles, mounted on a wooden base. The cup is inscribed with text, and the base has a plaque with text.

Continued&gt;&gt;&gt;&gt;&gt;

Having raised Les on the telephone, I explained to Les the street we were currently sat in and hoped he would give me simple instructions to his QTH. But Les's reply surprised us both somewhat, it went something like this, 'You are **where**? There is no street of that name in Carmel. You do realise Carmel is on Anglesey?' After a little cursing, we set off to Carmel on Anglesey and some 45 minutes later we arrived at Les's QTH to collect the valves. So we travelled an extra 30 miles or so before being successful.

So first lesson learned having moved to North Wales, when taking the QTH of an amateur, ensure that there is only one town/village of that name in the locality, and check which county they reside in Gwynedd or Anglesey! But the positive is the FT101z is now happy once again and Beth and I have explored parts of Anglesey we never knew existed :-)

Well enough waffle from me, I hope to hear many of you on the bands for a natter over the coming months and perhaps see some of you at Wellington Scout Hut next weekend for JOTA! *(email dated 11 October—Ed)*

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## GB3ZME 5.7 GHz Microwave Beacon Antenna Repairs—by Martyn G3UKV

Due to the physical location of the 5.7 GHz beacon, which had gone AWOL some months ago, a repair squad was assembled over two weekends in the autumn to undertake the necessary repairs. Thanks to all who gave of their time to assist, and especially to Simon GOUFE who brought and lead the team in erecting and dismantling his scaffold tower, not once, but TWICE, to access the mast !

At the same time, the opportunity was taken to drill through the Centre's wall to insert two threaded rods and a steel bar on the inside, since strong winds on the site had loosened the original rawlbolts holding the 'K' support bracket for the microwave antennas' mast repeatedly. Jobs done.

A few photos on the TDARS on-line version of this Newsletter set the scene.

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## **Follow-up to the Vintage Radio evening and Surplus Sale.—by Peter M1FGN**

Look at the following:- “Radiomuseum.org”. Virtual radio museum and antique radio catalog. With this search page (HP) you enter the most complete catalogue of Old Time radios. It also includes crystal receivers, TV, speakers, rectifiers, hi-fi amps, record players, t/recorders, mikes, boat anchors, Old Time amateur gear etc.

Extensive data on 253,906 old radios, 1,582,680 pictures, 634,701 printable schematics are included. (23/11/14). 183078 collector prices and data for 60559 valves/tubes and semiconductors. Radiomuseum is a not-for-profit organisation from members in more than 90 countries, who have uploaded photos, text & schematics. This input can help build our own radio home page in the website if they are from our collections. Please see **Information** and **Help** (blue) icons for each page and the Forum if you need help in repair or restoration. I looked up the TR82/B from Bush, and found it came in many versions for SW/MW/LW and later VHF sets, plus hybrid versions that included a DK96 valve as well as transistors.

This photo was taken at the surplus sale in November with M/C Eric 'KZB. Kevin 'UPF 'cooked the books' (thanks Kev & Eric—Ed).





## **A Plea for Help on Marconi Day 2015 (April 24-26th)** - by John M0JZH

As you all know Simon 2E0CHV moved to Wales earlier this year to become 2W0CHV, and although he was going to be staying on to help us with our efforts at Tywyn, this has now changed and he now finds himself on the committee for the Dragon Club, the ones who put on the station at Waunfawr GB4MD.

I need for someone to step forward and give me a hand this year to put on the station. I am hoping that the station that we will put on for 2015 will not be very different to that we put on for 2014; it all seemed to work well. If you look at the RadCom issue that gave information about how the event ran, then many stations were claiming 200+ contacts compared to our 1000+ contacts!! We have a good track record of putting on a decent station, and I am looking to build upon this hard work that has been put in over the last few years.

I would be grateful for whatever help you can spare. Most of the help is centred around the organisation of the site and equipment, I have the station plans and equipment lists.

After Christmas I will also begin to canvas for help to man the station from the Friday lunchtime over to the Sunday packing up.

**Many thanks: John M0JZH**

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## Fixing the 5.7 GHz GB3ZME Microwave Beacon



Ground Zero—G3UKV, 2E0DTB, G0UFE, 2E0TRO



The Antenna in Question, ready to go —Rob M0TOY



Drilling for oil ? - Simon G0UFE



## Fixing the back plate inside—Martin 2E0TRO

**This list of activities was drawn up by the Committee in preparation for the January 7th 2015 Forum Meeting at HQ. Nearly all the items listed have featured in the TDARS Programme in the last year or two.**

## **TELFORD & D.A.R.S. ACTIVITIES & DEVELOPMENTS**

### **TALKS AND DEMONSTRATIONS**

#### ***By Committee, Members and Visiting Speakers***

**Incl:** - TXs, RXs, Digital, Computers, Antennas, ATUs, QRP/QRO, Propagation, Mobile, Data Modes, Satellite, Vintage, Construction Techniques, Test Equipment, Calibration, Operating, Principles, Something New.

**Bring and Show** - Eg Old receivers, Latest Rigs, Projects, Widgets

**Skills evenings** - including progression and sequencing

**Ten Minute Talks** - Members' participation, Mini Topics

**Training** - Operating, Topic evenings, Demonstrations, Licence preparation

### **MORSE**

**Learning the Code** - At club, On-the-Air, Science days at Blists Hill

### **OPERATING PORTABLE**

**Special Event** (eg JOTA, G100RSGB), SOTA, Monthly, Leap Frog, Marconi, Microwaves,

**Field Days/Contests** - VHF NFD, HF NFD, 6m Trophy, uWave, UKAC, G3Z, Club Contest (160m)

**Expeditions** – Local (eg Wappenshall, Wroxeter) and Not-so-Local ( eg Is of Man, Guernsey)

### **CONSTRUCTION**

**Projects** - mini (At Club, Under a fiver, weekend), or more intricate (made at home, but shared at club)

### **SOCIAL ACTIVITIES and PR**

**Incl. refreshments** - BBQ, Bowling, Visit other Clubs, LW Village Field, Christmas, Hallowe'en, Summer

**TDARS Reflector** (Yahoo group) – sharing ideas and practice

**Public Special Event Stations** – Marconi (Tywyn), JOTA, Museums OTA

**Twitter, Facebook**

### **DIRECTION FINDING** (DF or 'Foxhunting')

**Local** to Little Wenlock, **wider area** (eg Town Park) – on foot or by car

### **QUIZZES**

**Various** - Members, Inter-Club, LW Village Hall Quiz Team.

### **EQUIPMENT SALES**

**Auction** or **Table Top** sales. Also **Hamfest** (table-top and B & B)

### **VISITS**

**Wednesday / Weekend** (Hack Green, Spaceguard, Drakelow, Kidderminster Vintage Museum etc)

**TELFORD HAMFEST** – First Sunday in September

**NEWSLETTER** – Bi-monthly: Input always welcome!

**WEBSITE** – Hundreds of 'hits' every month: Input always Welcome!

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